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AUTHOR	Mills, LaVelle; Suter, Dwayne
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ABSTRACT

Although institutions of higher education have traditionally offered courses to students at times and places convenient for faculty and the institution, new communications technologies allow for the provision of distance courses that are also convenient for students. Distance education is characterized by three factors: communication between educators and students is influenced by geographical distance, communication is two-way and interactive, and technology is used to facilitate learning. Recent trends in higher education, including increasing numbers of non-traditional students and shrinking resources, make distance education an opportunity for educational institutions to improve learning. Although studies have generally shown no significant differences between traditional classroom-based learning and distance education, distance learning brings the opportunity to implement new instructional designs that are more participant-centered and that improve learning. In fact, these changes are currently underway, as more faculty are being given access to technology, and the training to use that technology. Finally, as institutions of higher education respond to the need for new instructional design formats to accommodate non-traditional students, several factors unique to older, employed students should be kept in mind, including the fact that individuals' work shifts can change from week to week, emergencies can occur at jobs at any time, not all people will need to study entire courses, and presentations should be kept short to avoid interrupting the work day. Contains 12 references. (BCY)

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LaVelle Mills, Ph.D., S.P.H.R.
Director, Center for Instructional Technology
and Distance Learning
Professor of Management
Tarleton State University
Box T-0810
Stephenville, TX 76402

Phone: 817-968-9050
FAX: 817-968-9540
E-mail: mills@tarleton.edu

Dwayne Suter, Ph.D., P.E.
Professor of Agricultural Engineering and Food Science
Texas A & M University
226 Scoates Hall
College Station, TX 77843-2117

Phone: 409-847-9578
FAX: 409-845-3932
E-mail: d-suter@tamu.edu

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Distance Learning: A Window of Opportunity for Higher Education

"In the Industrial Age we went to school. In the Communication Age, school comes to us. This is the message implicit in the evolution of distance education." (Manburg, 1995). The message of change in education occurs repeatedly in the literature. "We're living in a time of rapid change when the need for informing and educating is becoming critical. To help meet these needs, 'distance education' is becoming increasingly important." (Lehman, 1996). Two key factors driving the change include (1) greater access to information and (2) restructuring of the markets.

The format for delivery of higher education has been relatively stable for many years. Faculty traditionally have selected the courses they thought best for students and delivered those courses in the places and at the times convenient to the faculty and the university. Students have been expected to come to a campus and, for the most part, attend as full-time students.

Distance Learning is Changing Higher Education

Telecommunications technologies can provide another way to deliver education at a time and place that is more convenient to the students. In his book *Understanding Distance Education: A Framework for the Future*, D. R. Garrison offers three criteria for defining distance education:

1. The communication between the trainer and participants is separated by a geographical distance.
2. The communication is two-way and interactive.
3. The technology is used to facilitate learning. (Thach and Murphy, 1995).

Educational providers no longer have to be located in the same physical location as the learners. Learners may be taking a lunch break at work and use telecommunications technologies located at the work site to complete college courses. Today's learners may live in rural areas or work at remote military sites and still have access to higher education through the same type of telecommunications technology. The death of distance is a recurring phenomenon in higher education today due to the rapidly growing use of telecommunications technology to deliver what was once available only in a traditional education format. Distance continues to become more irrelevant as a hurdle preventing access to quality educational opportunities. "New York to London is only five miles further than New York to Newark via satellite" (Thach, 1996). Telecommunications technologies have the potential to provide educational opportunities to whatever location the learner prefers.

As rapid changes continue to occur in higher education today in the field of distance education it is important to look for ways to sustain and focus these changes so that the impact is positive and one that is occurring by choice rather than by chance. One can look to the general theory of change in human systems pioneered by Lewin in 1947 and elaborated and refined by Schein in studies of management development in 1961 and brought into the field of human relations training by Schein and Bennis in 1965.

(Paulsen and Feldman , 1995). The general theory of change presented by these pioneers comprises the three stages of unfreezing, changing, and refreezing.

There are many events occurring in higher education today which are creating an environment of unfreezing. These changes include a growing non-traditional student body who may not be full-time students in a traditional campus setting and who desire to courses that help provide immediate support for career growth. They may be interested interest in certification programs rather than only focusing on a four year plus graduate degree track. Coupled with these changes are resources on campuses that continue to be overcrowded.

In a time when non-traditional students are becoming more a norm than an exception, higher education has an opportunity to re-evaluate the way it delivers education. An example of student preference for change involving the use of educational technology can be seen at Miami-Dade Community College where the median student age has been reported as twenty-eight. One expectation of students in this age group is they are more likely to be working full time than the traditional college age student who may have recently graduated from high school and gone directly into higher education as a full-time student. There may be more effective ways to provide access to education for students in higher education such as those found at Miami Dade. When students at Miami-Dade are required to take a placement test, they are given a choice of taking it on a computer terminal or on hard copy. Ninety percent select the high-tech option. This preference by students for the use of technology may not seem to be too important until the use of technology in teaching is considered. Robert H. McCabe, former president of Miami-Dade and senior fellow of the League for Innovation in the Community College says of the need to begin using technology in teaching: "...,but at least 90 percent of teaching is being done in standard lecture format. It's not effective." (McCabe, 1996)

In 1979 the Association for Supervision and Curriculum Development published a book, *Moving Toward Self-Directed Learning*, that was based on three premises:

1. That most people live in a world largely created by themselves.
2. That most people do those things most effectively which make sense to them.
3. That for complete living people need to make choices about and be responsible for their own behavior. (Della-Dora, 1979).

These premises are all consistent with characteristics of adult learners who tend to be effective in a distance learning environment. Ten years later perceptions that "distance courses offer at most a type of 'back-door' learning or are a second-best substitute for on-campus instruction could still be found." (Knapper, 1988). For perceptions such as these to remain in 1996 is to ignore the quality found in distance learning courses. A buggy whip manufacturer is said to have remarked on learning of the invention of the automobile that the horseless carriage was definitely not here to stay. Distance learning has the potential to change higher education as much as the automobile changed transportation. In both cases, access to desired opportunities play a key role.

Distance Learning is an Opportunity for Higher Education to Improve Learning

Thomas Russell, Director of the Office of Instructional Telecommunications at North Carolina State University has reported findings from studies of the learning

effectiveness from 218 research reports, summaries, and papers covering education offered over a fifty year period. He reports that there has consistently been no significant difference between learning that occurs in a traditional classroom and learning that occurs in a distance learning environment. (Russell, 1996).

A study reported by Tom Clark in 1993 showed that overall faculty attitudes toward college-credit distance education were at least neutral when considering distance education in general or distance education in higher education. When asked about the use of distance education in their program or by them personally, the overall faculty responses tended to move from neutral to more negative. This was an interesting contrast with the faculty who have used distance education a great deal. The responses received in the study from these faculty were consistently more positive. Faculty perceptions will continue to be critical to continued growth and effectiveness of distance learning.

As telecommunications technologies bring change to higher education, instructional design is another factor that will be critical to the success of distance learning. Instructional design can be a way to help move from "no significant difference" when comparing traditional face-to-face instruction with instruction in a distance education environment. Courses taught in a distance education format can be designed so that they are primarily instructor-led and participant-centered. Faculty can make sure their courses are designed to actively involve the learners. "A common trap that catches newcomers to the arena of distance learning and instructional design is becoming enamored of the technology and leaving objectives and methodologies by the wayside." (Lehman, 1996). A very real objective for teaching in a distance learning environment is to make the technology transparent. The focus must remain on teaching and learning. The technology is simply a tool for allowing the teaching and learning to occur at a distance in a manner that is more convenient and more accessible to the learners.

Students are in many ways customers of higher education providers. Industry works hard to provide quality customer service. Higher education needs to consider students as customers. Darlene Weingand, University of Wisconsin-Madison says, "We do need to meet the needs of student groups. They are definitely customers. Universities and colleges across the nation need to provide to meet the needs of customers. We can't not do it!" (Lehman, 1996). As higher education examines student needs from a customer framework, customary methods and times of delivering higher education will change in many cases.

Innovative faculty will meet the challenges relating to changes in governmental and institutional support of higher education, instructional design, technologies used, times and places of course delivery, and ages, backgrounds, and locations of students. Faculty need training and support to enable them to continue to provide a quality education. Distance learning training can be provided at off-campus locations. The opportunity for faculty to participate in training programs at an off-campus training center can be an opportunity for faculty to learn from each other. Faculty need to experience the distance learning environment as the student will experience it. They also need support and encouragement to learn new software that can be an effective delivery tool in a distance learning environment.

Universities tend to reward what they value. It is easy to say that teaching is important in a university environment. It is also easy to review criteria for faculty tenure and promotion. If teaching is really important, the criteria for faculty tenure and promotion will include teaching as an important component of the evaluation process. If distance learning is to be effective it must become part of the mainstream of higher education. The time and effort required to prepare and deliver a distance learning course effectively is significantly greater than that required for the same course delivered in a traditional classroom. If the university truly values this time and effort required of faculty who are designing and delivering distance learning courses, the tenure and promotion policies will recognize and reward such teaching. Effective instructional design will enhance student learning in on-campus and distance learning environments. Faculty who redesign their course materials for effective delivery to distant learning locations often discover that previously utilized formats were not well designed.

The first time a faculty member teaches a distance learning course the experience can be overwhelming. Time demands are much greater in terms of preparation of support materials and hand outs which are frequently prepared using software such as PowerPoint. Planning for interactivity between students and between sites takes longer. Release time for the faculty member to absorb these additional challenges and responsibilities could be invaluable. The university also needs to consider the issue of compensation as it relates to the faculty member who is teaching distance learning courses. If these faculty are consistently doing more work, perhaps this should be reflected in monetary compensation as well as some type of release time. While release time may not be possible every time a faculty member teaches a distance learning course, the first time that course is taught by distance learning release time could well be the difference between an effective course design and delivery versus a burned-out and frustrated faculty member.

Universities may also find themselves faced with the need to develop a market plan that is different from the past. Marketing distance learning courses may well require good strategic marketing principles in terms of product design, price, distribution, and promotion. (Duning, 1993). Students may be a mix of traditional and non-traditional on-campus students as well as non-traditional students who may be full-time employees of a company some sixty miles away from the university. These students' primary contact with the university may be during a course taken on the company premises before work, during lunch, or at the end of their work shift. They may have no plans to return to school full-time due to career choices or family responsibilities but they may be very eager to pursue additional college level course work.

The second stage of Lewin's general theory of change is changing. (Paulsen and Feldman, 1995). Higher education is currently in the midst of this stage. This can be seen in the design and delivery of distance education courses that create the environment in which effective learning is occurring. Faculty are being provided access to software and hardware that allow them to incorporate technology effectively into their course design and delivery. Faculty are being provided with training and support to learn and use the emerging and exciting options available in today's instructional technology. Universities are looking at students as customers and beginning to market distance education programs to meet these changing demands. How widespread are these changes

across higher education? If only a select few faculty are included in these opportunities can the change last? Probably not. For the changes to become permanent they must permeate the university infrastructure. All faculty who have an interest in becoming a part of distance education must have access to the training and support that will not just allow them to become effective but will support and encourage their growth and effectiveness in this new area of higher education.

Distance Learning is an Opportunity for Higher Education to Re-evaluate the Role and Scope of Teaching

As change continues to emerge within higher education in the form of quality distance education, it is imperative that there is an intentional move into the refreezing stage of the general theory of change as presented by Lewin in 1947. (Paulsen and Feldman, 1995). It is the continued support and demand for ongoing innovation and quality in distance education that will lead to refreezing. How exciting it could be for higher education if the refreezing stage could provide a platform for continued growth and change. Four areas where continued growth and change can be expected as higher education continues to advance in the distance learning environment include Instructional design, differences in educational needs and expectations of traditional and non-traditional students, collaboration with local site coordinators, and the use of multimedia in the presentation of course materials.

Instructional design will be a very important factor in the delivery of educational products in distance learning environments. Although interactivity in real time may not always be possible, it should be attempted where possible. Even delayed interactivity offers some advantages in that each participant can contribute when time permits.

It is important to recognize that practicing industry professionals will likely bring a different set of skills, competencies, interests, concerns, and questions to the "distant classroom" than will the typical undergraduate or graduate student that we see on campus. Additionally, the industry students may be less concerned with degree titles and more concerned with bottom line training in foundation skills, principles of operation, and current technology trends. A key question is how will higher education respond to the need to develop new and different instructional design formats and utilize a variety of delivery systems to reach the non-traditional students? Collaborative efforts involving the private sector, higher education, and governmental agencies will be needed to meet expertise needs of the future. The role of the professional societies will also need to be considered.

There are several unique factors involving the non-traditional students participating at a distance including, but not limited to:

1. Courses that follow a typical on-campus schedule and number of credit hours do not have sufficient flexibility for industry personnel;
2. People work in shifts which sometimes rotate on a regular basis to prevent certain personnel from always having the undesirable times;
3. Even if a person is at the work place at the time of the live telecast, he/she may have an emergency which prevents participation in the event;
4. Many of the participants do not need the entire course but only certain segments/modules;

5. Some of the personnel may need special tutoring on site to keep up with the course and this service can often be provided by local employees;
6. In some cases the telecasts will need to be scheduled after hours but some companies prefer during work hours and consider the activity a part of the work assignment;
7. Many local managers prefer a limited length in the interruption of the work schedule but do not complain as long as the session does not exceed two hours in duration;
8. Offering the course as continuing education or extension credit often provides more flexibility and accommodates a wide variation in student competencies and knowledge base; and
9. All of the educational materials should be provided ahead of time at each local site and the use of printed presentation slides/notes to permit easy note taking which enhances the learning process.

The role of the local site coordinator(s) is very important since learning is a social activity. The local coordinator(s) should not simply be at the site to open the room, connect the equipment, and other routine activities but should assist in appropriate ways to ensure maximum participation of each student. Knowledge of the subject matter is very desirable as it adds to confidence of the local participants as they do not feel so "distant" from the presenter. Also important will be the relationship and collaboration between the faculty member and the local site coordinator. Many faculty in higher education today are not used to working with and through professional support personnel in the classroom.

The use of multimedia in the presentation of the materials adds to the clarity and ease of understanding of the topics covered. The use of multimedia also permits rotation of presentation techniques; thus minimizing the tendency of participants at remote sites becoming bored and "tuning out" during the session. Most students are courteous and will not walk out of the classroom if they become bored and feel that they are wasting their time. However, the situation is often very different at distant locations as they are not always in "eye contact" with the presenter.

Universities and their faculty must be willing to accept the challenges and opportunities offered by distance learning. At the turn of the century some rather prosperous towns didn't see the need for railroads to come through their town. Many of those once prosperous towns no longer exist. Railroads themselves have experienced change. Railroads forgot they were in the transportation business. What is the business of the university? If it is to provide a quality education to students who need and want that education, can we afford to overlook the possibilities offered by distance education? Distance education could be a way universities can continue to deliver excellent traditional courses while reaching out to an additional student body who chooses not to be a traditional on-campus student body. The future of higher education is exciting for both groups of students and for the faculty who will deliver education in this new environment.

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LaVelle Mills, Ph.D., S.P.H.R.
Executive Director,
Panhandle Information Network
Professor of Management
West Texas A&M University
P. O. Box 30698
Amarillo, Texas 79120

Phone: 806-376-5521, ext. 416
Fax: 806-373-3432
E-mail: lavelle.mills@pintx.net

Dwayne Suter, Ph.D., P.E.
Professor of Agricultural Engineering and Food Science
Texas A&M University
226 Scoates Hall
College Station, TX 77843-2117

Phone: 409-847-9578
Fax: 409-845-3932
E-mail: d-suter@tamu.edu